

A NEW PARASITE OF THE HARLEQUIN CABBAGE BUG.

BY L. O. HOWARD, WASHINGTON, D. C.

The great damage which has been done to cabbage and other cruciferous plants by the harlequin cabbage bug (*Murgantia histrionica*) in its spread towards the north-east renders of interest any comments upon its natural checks. Professor H. A. Morgan, of the Louisiana Agricultural Experiment Station at Baton Rouge, has reared in considerable numbers a Proctotrypid parasite from the eggs of this destructive insect, which was named by Mr. Ashmead *Trissolcus murgantiae*. With commendable enterprise, Professor Morgan has sent eggs of the cabbage bug to various Experiment Station Entomologists situated in localities which the *Murgantia* has more or less recently invaded, and to which it seems probable that the parasite has not yet followed it. Professor Webster, of Ohio, has announced that he is trying to introduce this beneficial insect, and Professor Johnson, of Maryland, is making the same effort with Professor Morgan's help.

As preliminary to this introduction experiment, Professor Johnson has made an effort to ascertain whether *Murgantia histrionica* is already parasitized in its egg condition in Maryland. In the course of this effort he has bred several specimens of a Chalcidid parasite which he has asked the writer to name. Examination shows this insect to belong to the genus *Encyrtus*. It is interesting to note that no Encyrtinae are known in Europe to live in heteropterous eggs. In this country, however, several species probably have this habit. Mr. Ashmead has reared a species from the eggs of *Anasa tristis*, in Florida, and in the Insectary of the Department of Agriculture at Washington species have been reared from the eggs of *Prionidius cristatus*, received from Texas, and from the eggs of an unknown heteropterous insect found upon pine in California. The species reared by Professor Johnson differs from any of these. It is very closely related to *Encyrtus mitratus*, Dalman, of Europe, the host relations of which are not known. The specimens in collections have been captured. It may ultimately prove to have been reared from heteropterous eggs.

As unsatisfactory as it is to describe isolated species, it is sometimes desirable, as in this instance. The parasite has some importance, and Professor Johnson wishes to refer to it definitely by name. The following description is therefore submitted :

Encyrtus Johnsoni, n. sp.

Female. — Length, 0.8 mm.; expanse, 2.1 mm. Belongs in the *E. mitratus* group. Antennal scape cylindrical; ovipositor scarcely extruded; wings hyaline, marginal vein lacking. Pedicel of the antenna three times as long as wide, nearly cylindrical, nearly three times as long as first funicle joint; first funicle joint a little longer than wide, remaining funicle joints increasing slightly in length; entire funicle subcylindrical; club as long as four preceding funicle joints together, somewhat swollen, ovate; entire flagellum slightly hairy. Body compact; thorax somewhat convex, abdomen rotund; mesonotum with short sparse white pile; vertex moderately narrow; ocelli forming right angle triangle; mesonotum finely transversely shagreened; mesoscutellum finely transversely shagreened at base, nearly smooth at tip; axillæ well separated at tip. General colour, metallic green; mesoscutum highly lustrous; axillæ and base of scutellum more opaque; tip of scutellum and abdomen shining; reflections of head violaceous; antennæ dark brown, nearly black; all legs uniformly light honey-yellow.

Male. — Closely resembles female, except in the following particulars: Antennæ, which are light brown in colour, have an obconical pedicel of which the breadth nearly equals the length, and which is shorter than funicle joint 1; first funicle joint a little longer than second, remaining joints subequal in length; all of funicle and club with long hairs; club not widened and nearly as long as two preceding funicle joints together; abdomen broadly subtriangular.

Type No. 1424. U. S. Nat. Mus. (Coll. Dept. Agric.)

Described from two females, one male, reared by W. G. Johnson, College Station, Md., Aug. 22, 1897, from eggs of *Murgantia histrionica*.

NOTES AND OBSERVATIONS ON SEVERAL SPECIES OF DIPTERA.

BY F. M. WEBSTER, WOOSTER, OHIO.

Rhamphomyia mutabilis, Loew., has several times been observed preying upon *Bibio pallipes*, Say. I once saw hundreds of the former on a picket fence that had recently been whitewashed, and all appeared engaged in capturing the latter; at any rate hardly one could be found that was not engaged in sucking the life out of a victim. In one case the sexes were pairing while the female was lunching upon a recently captured *Bibio*.